



# National Transportation Safety Board Aviation Accident Final Report

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<b>Location:</b>	Dover, TN	<b>Accident Number:</b>	ATL04CA129
<b>Date &amp; Time:</b>	06/12/2004, 1400 CDT	<b>Registration:</b>	N5153E
<b>Aircraft:</b>	Cessna 172N	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General Aviation - Instructional		

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## Analysis

The certified flight instructor (CFI) was conducting an instructional flight and landed at the intermediate stop with out incident. Prior to departing on the return flight, the CFI checked internet weather, and observed "bad weather" approaching the departure airport. He and the student pilot departed from runway 25 performing a soft field take off. Immediately after rotation the CFI leveled the airplane to increase airspeed. The CFI stated, "this took longer than usual due to wind shear." The airplane reached 60 knots and they were between 25 to 50 feet on initial take off climb, when they encountered a "severe cross wind gust of an estimated 40 to 50 knots from the right putting the wings in a near vertical attitude." The CFI applied rudder and aileron, and the airplane collided with the trees and the ground. Another pilot who landed at the airport before the accident airplane departed stated, black clouds were visible in the distance and there were thunderstorms in the area.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: The certified flight instructor initiated flight into thunderstorm activity that resulted in a loss of control and the subsequent collision with trees.

## Findings

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Occurrence #1: IN FLIGHT ENCOUNTER WITH WEATHER

Phase of Operation: TAKEOFF - INITIAL CLIMB

Findings

1. (C) WEATHER CONDITION - THUNDERSTORM
2. (C) FLIGHT INTO ADVERSE WEATHER - INITIATED - PILOT IN COMMAND

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Occurrence #2: LOSS OF CONTROL - IN FLIGHT

Phase of Operation: TAKEOFF - INITIAL CLIMB

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Occurrence #3: IN FLIGHT COLLISION WITH OBJECT

Phase of Operation: DESCENT - UNCONTROLLED

Findings

3. OBJECT - TREE(S)

## Factual Information

### Flight Instructor Information

<b>Certificate:</b>	Flight Instructor; Commercial	<b>Age:</b>	45, Male
<b>Airplane Rating(s):</b>	Multi-engine Land; Single-engine Land	<b>Seat Occupied:</b>	Rear
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	Airplane	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	Airplane Single-engine	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 2 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	07/21/2003
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b> 03/31/2004		
<b>Flight Time:</b>	2144 hours (Total, all aircraft), 100 hours (Total, this make and model), 2005 hours (Pilot In Command, all aircraft), 194 hours (Last 90 days, all aircraft), 68 hours (Last 30 days, all aircraft), 3 hours (Last 24 hours, all aircraft)		

### Student Pilot Information

<b>Certificate:</b>	Student	<b>Age:</b>	37, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	None	<b>Restraint Used:</b>	Seatbelt, Shoulder harness
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	Yes
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	05/11/2004
<b>Occupational Pilot:</b>	<b>Last Flight Review or Equivalent:</b>		
<b>Flight Time:</b>	30 hours (Total, all aircraft), 27 hours (Total, this make and model), 2 hours (Pilot In Command, all aircraft), 27 hours (Last 90 days, all aircraft), 21 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

Aircraft Make:	Cessna	Registration:	N5153E
Model/Series:	172N	Aircraft Category:	Airplane
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	17271739
Landing Gear Type:	Tricycle	Seats:	4
Date/Type of Last Inspection:	04/09/2004, Annual	Certified Max Gross Wt.:	2300 lbs
Time Since Last Inspection:	55 Hours	Engines:	1 Reciprocating
Airframe Total Time:	4707 Hours at time of accident	Engine Manufacturer:	Lycoming
ELT:	Installed, activated	Engine Model/Series:	O-320-H2AD
Registered Owner:	McCauley Aviation Inc.	Rated Power:	150 hp
Operator:	McCauley Aviation Inc.	Operating Certificate(s) Held:	None

## Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:	CKV, 550 ft msl	Distance from Accident Site:	30 Nautical Miles
Observation Time:	1352 CDT	Direction from Accident Site:	64°
Lowest Cloud Condition:	Scattered / 3700 ft agl	Visibility	10 Miles
Lowest Ceiling:	Broken / 9000 ft agl	Visibility (RVR):	
Wind Speed/Gusts:	13 knots / 23 knots	Turbulence Type Forecast/Actual:	/
Wind Direction:	320°	Turbulence Severity Forecast/Actual:	/
Altimeter Setting:	29.98 inches Hg	Temperature/Dew Point:	31° C / 23° C
Precipitation and Obscuration:			
Departure Point:	Dover, TN (8TN7)	Type of Flight Plan Filed:	None
Destination:	Springfield, TN (M91)	Type of Clearance:	None
Departure Time:	1359 CDT	Type of Airspace:	Class G

## Airport Information

Airport:	Short Creek (8TN7)	Runway Surface Type:	Grass/turf
Airport Elevation:	390 ft	Runway Surface Condition:	Dry
Runway Used:	25	IFR Approach:	None
Runway Length/Width:	2500 ft / 30 ft	VFR Approach/Landing:	None

## Wreckage and Impact Information

<b>Crew Injuries:</b>	2 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	N/A	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	36.400833, -87.991667

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Carrol A Smith	<b>Report Date:</b>	09/01/2004
<b>Additional Participating Persons:</b>	Michael S Lonas; Nashville FSDO-03; Nashville, TN		
<b>Publish Date:</b>			
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.		
<b>Investigation Docket:</b>	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at <a href="mailto:pubinq@ntsb.gov">pubinq@ntsb.gov</a> , or at 800-877-6799. Dockets released after this date are available at <a href="http://dms.nts.gov/pubdms/">http://dms.nts.gov/pubdms/</a> .		

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The Independent Safety Board Act, as codified at 49 U.S.C. Section 1154(b), precludes the admission into evidence or use of any part of an NTSB report related to an incident or accident in a civil action for damages resulting from a matter mentioned in the report. A factual report that may be admissible under 49 U.S.C. § 1154(b) is available [here](#).